

IN THE CLAIMS

Please amend the claims as follows.

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (New) A capillary apparatus for taking up a first medium present in a first phase and containing at least one molecular species, without taking up a second medium, comprising:

a pipette having a lower end;

a diaphragm located at the lower end of the pipette, the diaphragm defining at least one pore, the at least one pore having at least one diameter, and wherein at least a part of the diaphragm further comprises biological material for binding the molecules contained in the first medium as the first medium is drawn therethrough;

a pump, coupled to the pipette, for producing a reduced pressure in the pipette; and

a pump controller for controlling the pressure within the pipette, wherein the pump controller maintains the pipette pressure at a level that ensures the second medium will not be taken up.

16. (New) The apparatus of claim 1, further comprising the pump controller ensuring that the reduced pressure in the pipette is less than a critical pressure.

17. (New) The apparatus of claim 16, further comprising:

the at least one diameter of the at least one pore having at least one radius, and wherein the critical pressure within the pipette is defined according to the following rule:

$$P = 2 \cdot \frac{S}{r},$$

where

S denotes the surface tension which is produced by the first medium in the at least one pore when the first medium has been taken up fully by the pipette, and

r denotes the at least one radius of the at least one pore.

18. (New) The apparatus of claim 17, wherein the at least one radius for the at least one pore is constant.

19. (New) The apparatus of claim 17, wherein the at least one radius for the at least one pore is variable.

20. (New) The apparatus of claim 15, wherein the diaphragm is further capable of analyzing the at least one molecular species contained in the first medium and bound in the at least one pore.

21. (New) The apparatus of claim 20, wherein the diaphragm comprises an analysis chip, the analysis chip capable of analyzing the at least one molecular species contained in the first medium and bound in the at least one pore.

22. (New) The apparatus of claim 15, wherein the first medium taken up into the pipette is subsequently dispensed.

23. (New) The apparatus of claim 22, wherein the pump controller controls the pressure within the pipette to dispense the taken-up first medium.

24. (New) The apparatus of claim 15, wherein the first medium is in liquid phase and the second medium is in gaseous phase.

25. (New) The apparatus of claim 15, wherein the first medium is in gaseous phase and the second medium is in liquid phase.

26. (New) A method for taking up a first medium, present in a first phase and containing at least one molecular species, without taking up a second medium, comprising:

providing a capillary apparatus, the capillary apparatus comprising:

a pipette having a lower end;

a diaphragm located at the lower end of the pipette, the diaphragm defining at least one pore, the at least one pore having at least one diameter, and wherein at least a part of the diaphragm further comprises biological material for binding the molecules contained in the first medium as the first medium is drawn therethrough;

a pump, coupled to the pipette, for producing a reduced pressure in the pipette; and

a pump controller for controlling the pressure within the pipette, wherein the pump controller maintains the pipette pressure at a level that ensures the second medium will not be taken up;

dipping the pipette into the first medium;

taking the first medium up into the pipette by applying a reduced pressure within the pipette, without taking up the second medium;

controlling the pressure within the pipette to ensure that the second medium is not taken up.

27. (New) The method of claim 26, further comprising providing a pump for applying the pressure within the pipette and a pump controller for controlling the pressure within the pipette and ensuring the pressure therein is less than a critical pressure.

28. (New) The method of claim 27, wherein the at least one diameter of the at least one pore comprises at least one radius and defining the critical pressure according to the following rule:

$$P = 2 \cdot \frac{\sigma}{r},$$

where

S denotes the surface tension which is produced by the first medium in the at least one pore when the first medium has been taken up fully by the pipette, and

r denotes the at least one radius of the at least one pore.

29. (New) The method of claim 28, further comprising exerting the controlled reduced pressure in the pipette, to ensure taking up the first medium without taking up the second medium.

30. (New) The method of claim 26, further comprising analyzing the at least one molecular species molecules bound in the at least one pore.

31. (New) The method of claim 26, further comprising providing the first medium in the liquid phase and the second medium in the gaseous phase.

32. (New) The method of claim 26, further comprising providing the first medium in the gaseous phase and the second medium in the liquid phase.

33. (New) The method of claim 26, further comprising dispensing the taken-up first medium from the pipette.

34. (New) The method of claim 33, further comprising controlling the pressure within the pipette to dispense the taken up first medium.